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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/275,578	03/24/1999	MASAYOSHI SHINOHARA	2803.62981	9928

7590

08/30/2002

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EXAMINER

BERNATZ, KEVIN M

ART UNIT

PAPER NUMBER

1773

19

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

09/275,578

Applicant(s)

SHINOHARA ET AL.

Examiner

Kevin M Bernatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-9 and ~~20~~ 12-15 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. Amendments to claim 1, filed on May 24, 2002, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

3. Claims 1 – 3, 5, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. ('890) in view of Okumura et al. ('733) and Ishikawa et al. ('021) for the reasons of record as set forth in Paragraph No. 4 of the Office Action mailed on December 26, 2001 (Paper No. 15).

Regarding the amendment to recite "mechanically textured" (claim 1, line 9) instead of "formed by mechanical treatment", the examiner notes that Okumura et al. ('733) explicitly teach using mechanical means (col. 4, lines 21 – 22: "A circumferential texture is applied by mechanical means, if necessary, on the NiPX layer").

4. Claims 6 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Okumura et al. and Ishikawa et al. as applied above, and further in view of Okuyama et al. ('227 A) for the reasons of record as set forth in Paragraph No. 5 of the Office Action mailed on December 26, 2001 (Paper No. 15).

***Response to Arguments***

**5. The rejection of claims 1 – 3, 5, 9 and 12 under 35 U.S.C § 103(a) – Chen et al. in view of Okumura et al. and Ishikawa et al.**

Applicant(s) argue(s) that the Ohara TS-10 glass does not inherently contain non-oriented irregularities. The examiner respectfully disagrees.

As is seen in applicants' attached figure (TS-10SX AFM Image), the surface of the substrate is not 100% uniform. While the examiner acknowledges that the surface roughness is small ( $R_a = 1.8 \text{ \AA}$ ), the figure does show recesses and protrusions across the entire surface. These recesses and protrusions read on applicants' claimed "non-oriented irregularities" since they are (a) non-oriented and (b) clearly irregular. The claims are not limiting to the size, amount or type of irregularities and the specification merely relates them to recesses and protrusions (specification page 13, lines 33 – 34 "non-oriented irregularities, i.e., recesses and protrusions"). As such, the examiner does not find applicants' arguments convincing and has maintained the position of inherency.

Applicants further argue that Okumura et al. ('733) teach using NiPX in place of NiP and that since the prior art medium uses an Al alloy substrate, it is distinguished from the glass or silicon substrates claimed by applicants. The examiner respectfully disagrees.

First, the examiner notes that Chen et al. is relied upon to teach the use of NiP and that Okumura et al., while teaching the superiority of NiPX when a higher coercivity

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is desired ('733, col. 2, lines 53 – 61), is only relied upon to teach that mechanically texturing the surface of NiP or NiPX is known in the art (col. 2, lines 56 – 57; example 18). Second, both Chen et al. and Okumura et al. are directed to glass substrates, not Al substrates (Chen et al., Examples; Okumura et al., col. 3, lines 36 – 47).

Applicants also argue that the combination of sputtering, thickness and P content of the NiP layer obtains “the remarkable effects of the present invention, whereas USP '021 is silent concerning this fact”.

Applicant(s) are reminded that **a detailed description of the reasons and evidence** supporting a position of unexpected results must be provided **by applicant(s)**. A mere pointing to data requiring the examiner to ferret out evidence of unexpected results **is not sufficient** to prove that the results would be truly unexpected to one of ordinary skill in the art. *In re D'Ancicco*, 439 F.2d 1244, 1248, 169 USPQ 303, 306 (1971) and *In re Merck & Co*, 800 F.2d 1091, 1099, 231 USPQ 375, 381 (Fed. Cir. 1986). In the instant case, if applicants are arguing that the surface roughness in combination with the above argued limitations produces unexpected results, a detailed description of the reasons and evidence supporting a position of the unexpected results must be provided. Currently, there is no showing of unexpected results on record and the examiner has maintained the rejections of record for the reasons cited above.

Finally, applicants argue that the combination of Okuyama et al. ('227 A) with Chen et al., Okumura et al. and Ishikawa et al. does not render obvious claims 6 – 8 since Okuyama et al. is only directed to using a CrMo underlayer with a 4-5 element Co-

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alloy magnetic layer and is silent concerning the use of a NiP or first Cr-based layer.

The examiner respectfully disagrees.

The examiner notes that Chen et al. clearly indicates that any suitable underlayer + magnetic layer combination is suitable for use with the disclosed substrates (col. 8, lines 35 – 62) and that Okuyama et al. disclose a combination of a CrMo underlayer and Co-alloy magnetic layer meeting applicants' claimed limitations which obtains a combination of both low noise and high coercivity (Paper No. 15, Paragraph 5). As such, the examiner deems there is sufficient motivation to combine the references and the rejection of claims 6 – 8 has been maintained for the reasons of record.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M Bernatz whose telephone number is (703) 308-1737. The examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



KMB  
August 28, 2002



Paul Thibodeau  
Supervisory Patent Examiner  
Technology Center 1700